

AMENDMENTS TO THE CLAIMS

CLAIMS

1. (Currently Amended) In a console processing unit for goods inventory management coupled via the Internet to at least one fixed detector and at least one mobile sensor, a [data structure] computer-readable medium for representing a monitored object, the [data structure] computer-readable medium comprising:

an object identifier, such object identifier representing one or more goods in production, inventory and shipment;

a first object location and a time monitored at such location, provided by a detector coupled to the console processing unit; and

a second object location and a time monitored at such location, provided by a sensor coupled to the console processing unit;

wherein an access means processes the [data structure] computer-readable medium securely using a digital certificate, watermark or encryption key, such that the [data structure] computer-readable medium is accessible for object-monitoring from only one or more specified network site or processor, the [data structure] computer-readable medium being provided automatically using control software for network surveillance in response to a user search query, the software comprising a network and data communication module, an object and map database, an object movement processing module, a security management module, an electronic transaction processing module, a diagnosis tool, a performance report updater module, and a visual object analyzer module comprising a neural network or simulation program for recognizing adaptively one or more identified goods for real-time tracking of multiple goods movement, whereby such modules are functionally integrated to enable surveillance-based commercial transaction using the [data structure] computer-readable medium.

2. (Currently Amended) The [data structure] computer-readable medium of Claim 1 further comprising:

a scheduled object location and a time scheduled for such location.

3. (Currently Amended) The [data structure] computer-readable medium of Claim 1 wherein:

a position signal being generated by the detector coupled to the [monitored object] console processing unit when such object is moveable within an observable range, a visual signal being generated by the sensor uncoupled to such object in the observable range.

4. (Currently Amended) The [data structure] computer-readable medium of Claim 1 wherein:

the detector comprises an accelerometer.

5. (Currently Amended) The [data structure] computer-readable medium of Claim 1 wherein:

a software agent associated with the monitored object accesses a database.

6. (Currently Amended) The [data structure] computer-readable medium of Claim 1 wherein:

the object identifier comprises an object name, an object group, an object query, an object condition, an object status, an object location, an object time, an object error, or an object image, video, or audio broadcast signal.

7. (Currently Amended) The [data structure] computer-readable medium of Claim 3 wherein:

the observable range is modifiable according to a rule set.

8. (Currently Amended) The [data structure] computer-readable medium of Claim 1 wherein:

the monitored object is monitored temporarily using an extrapolated or last-stored positional or visual signal.

9. (Currently Amended) The [data structure] computer-readable medium of Claim 1 wherein:

the monitored object is authenticated according to a voice pattern, a finger-print pattern, a handwritten signature, or a magnetic or smart-card signal.

10. (Currently Amended) The [data structure] computer-readable medium of Claim 1 wherein:

the monitored object is provided an electronic file comprising a book, a greeting card, a news report, a sports report, a stock report, an artwork, a research database, a personal list, a recorded or live voice or music transmission, an electronic tool, or a commercial transaction.

11. (Currently Amended) In a console processing unit for goods inventory management coupled via the Internet to at least one fixed detector and at least one mobile sensor, a method for processing data [a data structure for] representing a monitored object, the method comprising the step of:

transmitting to a processor in a network the [a] data [structure] comprising an object identifier, such object identifier representing one or more goods in production, inventory and shipment, a first object location and a time monitored at such location, the first object location being provided by a detector coupled to a console processing unit, and a second object location and a time monitored at such location, the second object location being provided by a sensor coupled to the console processing unit; wherein an access means processes the data [structure] securely using a digital certificate, watermark or encryption key, such that the data [structure] is accessible for object-monitoring from only one or more specified network site or processor, the data [structure] being provided automatically using control software for network surveillance in response to a user search query, the software comprising a network and data communication module, an object and map database, an object movement processing module, a security management module, an electronic transaction processing module, a diagnosis tool, a performance report updater module, and a visual object analyzer module comprising a neural network or simulation program for recognizing adaptively one or more identified goods for real-time tracking of multiple goods movement, whereby such one or more of such modules are functionally integrated to enable surveillance-based commercial transaction using the data [structure].

12. (Currently Amended) The [data structure] computer-readable medium of Claim 1 wherein:

the sensor comprises a radio-frequency identification device for locating the identified goods, and the detector comprises a camera for observing such identified goods, thereby enabling the

sensor and the detector to provide corroborative surveillance of the identified goods within an observable range in which the sensor is mobile relative to the detector.

13. (Currently Amended) The [data structure] computer-readable medium of Claim 1 wherein:

the sensor comprises a sensor signal port for sensing a low-power or fuel condition of the identified goods, thereby enabling the console processing unit to indicate or warn a down period for using the identified goods.

14. (Currently Amended) The [data structure] computer-readable medium of Claim 1 wherein:

the detector comprises visual-analyzer means for recognizing adaptively the identified goods using a neural network or simulation program, thereby enabling secure inventory management of the identified goods.

15. (Currently Amended) The [data structure] computer-readable medium of Claim 1 wherein:

the data structure indicates in-stock availability of the identified goods for transacting shipment, and a tax-rate for transaction at the location of the identified goods.

16. (Previously Presented) The method of Claim 11 wherein:

the sensor comprises a radio-frequency identification device for locating the identified goods, and the detector comprises a camera for observing such identified goods, thereby enabling the sensor and the detector to provide corroborative surveillance of the identified goods within an observable range in which the sensor is mobile relative to the detector.

17. (Previously Presented) The method of Claim 11 wherein:

the sensor comprises a sensor signal port for sensing a low-power or fuel condition of the identified goods, thereby enabling the console processing unit to indicate or warn a down period for using the identified goods.

18. (Previously Presented) The method of Claim 11 wherein:

the detector comprises visual-analyzer means for recognizing adaptively the identified goods using a neural network or simulation program, thereby enabling secure inventory management of the identified goods.

19. (Currently Amended) The method of Claim 11 wherein:

the data [structure] indicates in-stock availability of the identified goods for transacting shipment, and a tax-rate for transaction at the location of the identified goods.

20. (Currently Amended) In a network for goods inventory management for coupling at least one fixed detector and at least one mobile sensor, a single-chip integrated circuit for processing [a] data [structure for] representing a monitored object, the circuit comprising:

a processor provided in a wireless target unit for transmitting or receiving in a network the [a] data [structure] comprising an object identifier, such object identifier representing one or more goods in production, inventory and shipment, a first object location and a time monitored at such location, the first object location being provided by a detector, and a second object location and a time monitored at such location, the second object location being provided by a sensor; wherein an access means processes the data [structure] securely using a digital certificate, watermark or encryption key, such that the data [structure] is accessible for object-monitoring from only one or more specified network site or processor, the data [structure] being provided automatically using control software for network surveillance in response to a user search query, the software comprising a network and data communication module, an object and map database, an object movement processing module, a security management module, an electronic transaction processing module, a diagnosis tool, a performance report updater module, and a visual object analyzer module comprising a neural network or simulation program for recognizing adaptively one or more identified goods for real-time tracking of multiple goods movement, whereby one or more of such modules are functionally integrated to enable surveillance-based commercial transaction using the data [structure].

21. (Previously Presented) The circuit of Claim 20 wherein:

the sensor comprises a radio-frequency identification device for locating the identified goods, and the detector comprises a camera for observing such identified goods, thereby enabling the

sensor and the detector to provide corroborative surveillance of the identified goods within an observable range in which the sensor is mobile relative to the detector.

22. (Previously Presented) The circuit of Claim 20 wherein:

the sensor comprises a sensor signal port for sensing a low-power or fuel condition of the identified goods, thereby enabling indication or warning of a down period for using the identified goods.

23. (Previously Presented) The circuit of Claim 20 wherein:

the detector comprises visual-analyzer means for recognizing adaptively the identified goods using a neural network or simulation program, thereby enabling secure inventory management of the identified goods.

24. (New) A system for monitoring objects, the system comprising:

a detector for detecting an object and providing a first location of the object;

a sensor for providing a second location of the object;

a target unit communicatively coupled to the detector and the sensor in a network, the target unit is configured to receive data of the object detected, the first location provided by the detector and a time monitored at the first location, and the second location provided by the sensor and a time monitored at the second location; and

a processor communicatively coupled to the target unit via the network to access the data from the target unit, the processor configured to perform network surveillance in response to a user search query, store data of an object identifier, receive data of the object detected, compare the data of the object identifier with the data of the object detected, and determine object movement from the first location provided by the detector and a time monitored at the first location, and the second location provided by the sensor and a time monitored at the second location.

25. (New) The system of Claim 24 wherein the network surveillance comprises determining whether the target unit is within range of the network in order to observe the object.

26. (New) The system of Claim 24 wherein:

the target unit provides GPS location information associated with the object; and

the detector provides an image of the object.

27. (New) The system of Claim 24 wherein:

the object is a vehicle; and

the target unit is mounted or carried in the vehicle.

28. (New) The system of claim 24 wherein a database is coupled to the processor to maintain the current position for sensors coupled to the network.

29. (New) The system of claim 24 wherein the target unit comprises an accelerometer coupled to provide data indicative of movement to trigger object position calculation.

30. (New) The system of claim 24 wherein:

the object is an identified good;

the sensor comprises a radio-frequency identification device to locate the identified good; and

the detector comprises a camera for observing the identified good, thereby enabling the sensor and the detector to provide corroborative surveillance of the identified good.

31. (New) A method for monitoring objects, the method comprising:

detecting an object and a first location of the object;

sensing a second location of the object;

transmitting to a target unit, in a network, data of the object detected, the first location provided by the detector and a time monitored at the first location, and the second location provided by the sensor and a time monitored at the second location;

remotely accessing the data from the target unit;

comparing data of an object identifier with the data of the object detected; and

determining object movement from the first location provided by the detector and a time monitored at the first location, and the second location provided by the sensor and a time monitored at the second location.

32. (New) The method of Claim 31 wherein detecting the object comprises using a fixed detector.

33. (New) The method of Claim 31 further comprising registering the target unit in a database to indicate association with a particular object.

34. (New) The method of Claim 31 wherein determining object movement further comprises using last stored information about the object to provide predicted object location at a future time.

35. (New) A method for monitoring objects, the method comprising:
detecting a first location of an object;
sensing a second location of the object;
transmitting to a transceiver, in a network, data of an object identifier, the first location and a time monitored at such location, and the second location and a time monitored at such location; and
remotely accessing the data from the transceiver using a control software for network surveillance in response to a user search query, the control software comprising a visual object analyzer module for monitoring the object's movement.

36. (New) The method of claim 35 wherein detecting the first location of the object comprises detecting the object using a fixed camera detector.

37. (New) The method of claim 35 wherein the control software is configured to predict the position of the object.

38. (New) The method of claim 35 wherein monitoring the object's movement using the visual object analyzer module comprises comparing or correlating observable similarities or differences between initial and subsequent surveillance data.